Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed October 31, 2007. A Petition for Extension of Time is submitted herewith, together with the appropriate fee.

I.   Summary of Examiner's Rejections

Prior to the Office Action mailed October 31, 2007, Claims 1-6 and 21-34 were pending in the Application. In the Office Action, Claims 1-6 and 21-34 were rejected under 35 U.S.C. 103(a) as being anticipated by Sarkar et al. (U.S. Patent No. 6,754,659) in view of Nicholson et al. (U.S. Patent No. 6,631,519), and further in view of Flores et al. (U.S. Patent No. 5,734,837).

II.   Summary of Applicant's Amendment

The present Response amends Claims 1, 23 and 30, leaving for the Examiner's present consideration Claims 1-6 and 21-34. Reconsideration of the Application, as amended, is respectfully requested. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

III.   Interview Summary

On February 7, 2008, Applicant conducted an interview with the Examiner to discuss the claim rejections under 35 U.S.C. § 103(a). During the interview, Applicant and Examiner discussed the independent claims 1, 23 and 30 and the cited references of record. Examiner suggested amending claims 23 and 30 to more clearly define certain aspects of the embodiments therein. The present Response hereby amends claims 23 and 30 per Examiner's suggestions. Reconsideration of the application in light of the amendments and remarks is respectfully requested.

IV.   Claim Rejections under 35 U.S.C. § 103(a)

In the Office Action mailed October 31, 2007, Claims 1-6 and 21-34 were rejected under 35 U.S.C. 103(a) as being anticipated by Sarkar et al. (U.S. Patent No. 6,754,659, hereinafter Sarkar) in view of Nicholson et al. (U.S. Patent No. 6,631,519, hereinafter Nicholson), and further in view of Flores et al. (U.S. Patent No. 5,734,837, hereinafter Flores).

Claim 1

Claim 1 has been amended to more clearly define the embodiment therein. As amended, Claim 1 defines:

> *1.   A system for designing a business process, said system comprising:*
> *an introspection module that generates a catalog of generic components by introspecting a set of exposed application programming interfaces (APIs) of a plurality of heterogeneous applications created in different programming languages and transforming a plurality of implementation-specific components of said heterogeneous applications into the generic components of said catalog wherein the catalog is employed to invoke the plurality of heterogeneous applications from within a business process;*
> *a component manager coupled to the introspection module and operable to manage said catalog generated by the introspection module by defining and organizing the generic components in said catalog; and*
> *a process designer coupled to the component manager and operable to:*
> *select at least one of the generic components from said catalog managed by the component manager; and*
> *graphically construct a business process definition that includes a series of graphically represented activities linked by one or more transitions wherein at least one activity of said business process definition invokes the selected generic component from said catalog;*
> *a repository for storing the business process definition; and*
> *one or more process engines that execute said business process definition to instantiate a business process instance, wherein the business process instance interacts with the plurality of heterogeneous applications by invoking the generic components in said catalog and wherein the business process instance integrates the plurality of heterogeneous applications into a single process by invoking services from the plurality of heterogeneous applications during execution of the activities of said process.*

As amended, Claim 1 defines a business process management (BPM) system that integrates multiple heterogeneous backend applications of an organization into a single process. The process designer is used to graphically construct a business process definition that includes a series of activities linked by transitions. At least one of those activities will invoke a generic component from the catalog, which in turn calls a service from one of the multiple backend applications. The business process definition is stored into a repository and then executed by a process engine. Thus, by constructing an executing the business process instance, all of the

multiple heterogeneous applications within an organization can be integrated into a single and manageable process.

One advantage of this type of system is the integration of multiple backend applications, which may be written in different programming languages, into a single, manageable and seamless process. This eliminates the need to separately make sure that each application is compatible with one another and having to translate between different method calls or protocols. At the same time, it allows a single process to call the various services of these different backend applications and enables the ability to construct new business processes without having to change the existing backend applications or having to integrate the applications with each other.

The newly cited reference <u>Flores</u> teaches a method and apparatus for building business process applications in terms of its workflows. More specifically, Flores describes a graphical application builder which allows a business process designer to specify the design of the business process. This design is then used to generate a workflow-enabled application.

<u>Sarkar</u> has been previously cited and it teaches a method for running existing Java beans in an Enterprise Java Bean Environment. More specifically, Sarkar appears to disclose a system for running application code originally developed as simple Java beans in an EJB environment (Abstract). This is performed by defining an EJB and generating EJB support code that performs the functionality of the simple Java beans.

<u>Nicholson</u> has also been previously cited and it teaches an automated schema and interface generation. More specifically, Nicholson was cited as disclosing the automatic generation of interface definitions for reducing inconsistent interface and data model definitions.

However, Applicant respectfully submits that Flores in combination with Sarkar and further in combination with Nicholson (hereafter, cited references) fail to disclose or render obvious the features of Claim 1, as amended.

To begin with, the cited references fail to disclose a business process that integrates a plurality of different heterogeneous applications into a single process, as defined in amended Claim 1. Flores describes a graphical tool for constructing a workflow (business process), however this workflow is then used to generate an application (e.g. application builder, col. 6, lines 10-20). Therefore, Flores merely allows a programmer to create a program by describing it visually as a workflow. This is not the same as integrating a plurality of different heterogeneous backend applications, which have been created in different programming languages, into a single

process, as defined in amended Claim 1. The system of Claim 1 is used with applications that have *already been created* and which are not necessarily compatible with each other (e.g. different languages). It is not merely another graphical tool to create a computer program, which is described in Flores. Similarly, Sarkar and Nicholson also fail to mention this feature of Claim 1, as amended.

With the foregoing in mind, the following specific features of Claim 1 are also not disclosed by any of the cited references:

The cited references fail to disclose a generic catalog that is employed to invoke the plurality of applications from within a business process, as defined in amended Claim 1. This generic catalog is constructed by introspecting the exposed APIs of multiple different applications and then translating the implementation-specific components of those applications into the generic components in the catalog. No such functionality is disclosed in the cited references.

In the Office Action, Sarkar was cited as disclosing this feature of Claim 1. However, Sarkar merely discloses the Java introspection and reflection used to run Java beans as an EJB (col. 4, lines 20-58). Sarkar does not mention any catalog which is employed to invoke applications from within a business process, as defined in amended Claim 1. Furthermore, there is no mention of generating such a catalog by introspecting and translating the implementation specific components of multiple applications created in different languages into generic components in the catalog, as defined in amended Claim 1.

In addition, the cited references fail to disclose that at least one activity of said business process definition invokes the selected generic component from said catalog, as defined in amended Claim 1. In the Office Action, it was proposed that Sarkar teaches this feature on column 4, lines 14-27 by describing "installing the single generic EJB in an EJB container" (Office Action, page 4). Applicant respectfully disagrees. This installation of a generic EJB in an EJB container is very different from an activity of a business process invoking a catalog component, as defined in amended Claim 1. Sarkar does not maintain the generic EJBs in any catalog. More importantly, there is no disclosure whatsoever of invoking the generic component from an activity of a business process. This functionality of Claim 1 allows one process to invoke multiple different backend applications by using the generic catalog. None of this is described in Sarkar.

In addition, the cited references fail to disclose any business process instance that interacts with the plurality of backend applications by invoking the generic components in the catalog. In the Office Action, it was proposed that Sarkar teaches this feature on column 4, lines 20-27 by "executing the EJB support code to drive the generic EJB to perform the functions of one or more original Java Beans in the EJB environment" (Office Action page 5). Once again, Applicant respectfully disagrees. While Sarkar teaches that the generic EJB performs the functions of an original Java Bean, this is not the same as a business process that invokes the generic catalog components. None of the cited references disclose any business process that interacts with multiple backend applications.

In view of the above comments and amendments, Applicant respectfully submits that Claim 1, as amended, is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 23 and 30

Claims 23 and 30, while independently patentable, recite limitations that, similarly to those described above with respect to Claim 1, are not taught, suggested nor otherwise rendered obvious by the cited references. Reconsideration thereof is respectfully requested.

Claims 2-6, 21-22 and 24-29

Claims 2-6, 21-22 and 24-29 are not addressed separately, but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the comments provided above. Applicant respectfully submits that Claims 2-6, 21-22 and 24-29 are similarly neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

It is also submitted that these claims also add their own limitations which render them patentable in their own right. Applicant respectfully reserves the right to argue these limitations should it become necessary in the future.

V.   Conclusion

In view of the above amendments and remarks, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration

thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. § 1.136 for extending the time to respond up to and including February28, 2008.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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